The 2008 Lindahl Lectures: Monetary Policy in Theory and Practice

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2008 Lindahl Lectures: Outline

- Lecture 1, October 28:
  Transparency under flexible inflation targeting:
  Experiences and challenges (the present)
- **Lecture 2, October 29**:
  What have economists learned about monetary policy over the past 50 years? (the past)
- Lecture 3, October 30:
  Optimal monetary policy in an operational medium-sized DSGE model (the future)

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What have economists learned about monetary policy over the past 50 years?

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Lindahl Lectures 2
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Introduction

- 50 years long time in research: 1957- (1967-)
- Personal view (not necessarily shared …)
- What have we learnt that is most relevant for practical monetary policy?
- Selective, eclectic, controversial?
- Many important contributions left out
- Friedman, Presidential Address, AEA 1967: What is new and different?

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Friedman 1967

- "The Role of Monetary Policy"
- What monetary policy cannot do
- What monetary policy can do
- How monetary policy should be conducted

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Friedman 1967

- What monetary policy cannot do
1. Peg the nominal interest rate for more than very limited periods
2. Peg the unemployment rate for more than very limited periods

   Monetary policy can control nominal variables, not in the long run real variables

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Friedman 1967

- What monetary policy can do
1. Avoid being a major source of disturbance: Avoid major mistakes
2. Provide a stable background for the economy: Price stability
3. Contribute to offsetting *major* disturbances to the economy arising from other sources

Friedman 1967

- "I believe that the potentiality of monetary policy in offsetting other forces making for instability is far more limited than is commonly believed."
- "We simply do not know enough to be able to recognize minor disturbances when they occur or to be able to predict either what their effects will be with any precision or what monetary policy is required to offset their effects."

Friedman 1967

- "In this area [of monetary policy] particularly the best is likely to be the enemy of the good. Experience suggests that the path of wisdom is to use monetary policy explicitly to offset other disturbances only when they offer a 'clear and present danger'."

Friedman 1967

- How should monetary policy be conducted? Two requirements:
- **1st requirement**: Choose target that monetary policy can control: exchange rate, price level, or broad money
  - Fixed exchange rate not suitable for US
  - Price level in principle best, but too imperfect control (long and variable lag)
  - Broad money (better control, shorter lag)

Friedman 1967

- "[W]e cannot predict at all accurately just what effect a particular monetary action will have on the price level and, equally important, just when it will have that effect."
- "Attempting to control directly the price level is therefore likely to make monetary policy itself a source of economic disturbances because of false stops and starts."

Friedman 1967

- "Perhaps, as our understanding of monetary phenomena advances, the situation will change. But at the present stage of our understanding, the long way around seems the surer way to our objective. Accordingly, I believe that a monetary total [aggregate] is the best currently available immediate guide or criterion [target] for monetary policy…"

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Friedman 1967

- **2nd requirement**: Avoid sharp swings in policy: Achieve steady but moderate rate of growth of specified monetary aggregate
- "That is the most that we can ask from monetary policy at our present stage of knowledge. But that much – and it is a great deal – is clearly within our reach."

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Monetary targeting

- Tried in many countries: Failed and was abandoned
- In contrast, inflation targeting has worked fine
- In Germany, monetary targeting seemed to work (Bundesbank impressive performance)
- But Bundesbank was actually a nontransparent inflation targeter
- Friedman changed his view

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Inflation targeting

- Flexible IT: Stabilize both inflation around inflation targeting and resource utilization
- Forecast targeting: Choose interest-rate path so forecast of inflation and resource utilization "looks good"
- Why does targeting inflation directly (and stabilizing resource utilization) work?

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Better knowledge of transmission mechanism (!)

- Conventional wisdom OK, but more channels (expectations)
- Aggregate demand (channels: interest-rate, credit (fin acc), expectations) (*real* interest rate, Taylor Principle)
- Aggregate supply/Phillips curve (vertical, real MC/output gap, expectations)

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Better knowledge of transmission mechanism

- Expectations (of future short interest rates)
- "Management of expectations" (Woodford)
- Choosing and publishing interest-rate paths (RBNZ 1997; Norges Bank 2005; Riksbank, Sedlabanki Islands 2007; CNB 2008, …)
- Importance of credibility and transparency

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Better knowledge of transmission mechanism

- Theoretical developments matched by better empirical methods (Kalman filtering, VAR, Bayesian methods)
- Current frontier: Empirical Bayesian DSGE models (Riksbank: RAMSES, operational)

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Avoid and escape from deflation and liquidity traps

- When Zero Lower Bound for interest rate binds, use exchange rate as instrument
- McCallum: Taylor rule for exchange rate
- Svensson: Foolproof Way to Escape from a Liquidity Trap

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Monetary aggregates matter little (or not at all)

- But credit aggregates may matter
- ECB Nov 2007: Woodford, ECB paper
- Theoretical: No separate channel from money to inflation (no microfoundations for P*, real money gap, …)
- Empirical: Little or no predictive info about future inflation beyond other explanatory variables (also for low-frequency movements, Woodford)

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Friedman misunderstood

- "Inflation is always and everywhere a monetary phenomenon"
- Correlation between endogenous variables (nominal variables cointegrated)
- Correlation with inflation higher for interest rates and currency depreciation (Galí)
- Causality depends on monetary-policy regime

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Lindahl on money and prices?

- "The primary factors, which decide the circulation [of money], also have a direct influence on the price level, whereby the changes of the money supply and the price level admittedly command each other but do not display a one-sided causal connection in either direction. Hence, the changes of the price level are *not* explained by a reference to the simultaneous changes of the money supply."
  ["On the Relationship Between Money Supply and Price Level," Upps. Univ. Årsskr. 1929, p.17-18]

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Friedman misunderstood

- Strict monetary targeting:
  Money growth exogenous,
  determines endogenous inflation
- Strict inflation targeting:
  Inflation exogenous,
  determines endogenous money growth
- Fixed exchange rate:
  Inflation and money growth both endogenous,
  simultaneously determined

Importance of institutional framework (Bundesbank)

Three pillars:

1. Mandate (priority to price stability, also real stabilization)
2. Independence (avoid short-term political interference; clarify responsibility; target potential output, not efficient output)
3. Accountability (transparency)

Inflation bias, time consistency?

- Why no longer any inflation bias?
- Target potential output, not efficient output (full employment): Accept vertical Phillips curve (Blinder)
- Possible because of independence, price-stability mandate
- Commitment to price stability (loss function)
- Not commitment to particular policy rule

Taylor rules: Overemphasized and misunderstood

- MP often modeled as CB committed to Taylor rule
- No CB has committed itself to a Taylor-type rule; CBs respond to much more information than current inflation and output.
- The empirical fit of Taylor rules is modest: $R^2 < 2/3$ for first-differences of interest rate

Taylor rules: Overemphasized and misunderstood

- Taylor rules are not optimal, lack microfoundations, are not incentive-compatible.
- Taylor rules are simplified reduced forms, not structural equations (Lucas critique)
- In contrast, forecast targeting implies that CBs respond to everything that affects the forecast of the target variables, including judgment.

Taylor rules: Overemphasized and misunderstood

- Nevertheless, Taylor rules are **robust** (perhaps surprisingly robust). Why?
- Optimal interest-rate rules respond to all the determinants of (forecasts of) target variables
- Current inflation and output important predictors of future inflation and output
- Responding only to current inflation and output will almost never be bad

Taylor rules: Overemphasized and misunderstood

- But, with more information about the current state of the economy and the transmission mechanism, CBs can do better than Taylor rules and therefore deviate from them.

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What do we not know? Where should we make progress?

- How to do flexible inflation targeting more explicitly?
- Measures of resource utilization (output gap, potential output, conceptual and empirical problems)
- Relative weight on output-gap stabilization
- Forecast targeting with model uncertainty (from mean forecast targeting to distribution forecast targeting)

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What do we not know? Where should we make progress?

- Better modeling in empirical DSGE models
  - Financial markets, including the determination of yield curves and exchange rates
  - The credit channel
  - Labor-markets
  - Potential output, output gaps
  - Neutral interest rate, interest rate gaps

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What do we not know? Where should we make progress?

- Asset prices and monetary policy?
  - Asset prices not target variables, only information variables (indicators)
  - Matter for monetary policy if impact on mean forecast of target variables (inflation, resource utilization)
  - If threat to financial stability or payment system, may imply restriction on normal conduct of policy and also require special actions

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What do we not know? Where should we make progress?

- Monetary policy in a financial crisis
  - Financial stability normally achieved with other means than monetary policy (regulation, liquidity support, public administration of failed banks)
  - Changes in the transmission mechanism during a financial crisis?

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Summary

- Friedman 1967 – a classic
- Monetary targeting failed; inflation targeting has worked fine
- Better knowledge about the transmission mechanism
- Monetary aggregates matter little for monetary policy

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Summary

- The importance of the institutional framework
- Inflation bias, time consistency
- Taylor rules robust but often overemphasized and misunderstood
- What do we not know?

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